



CITY OF MIAMI GARDENS

10- YEAR WATER SUPPLY FACILITIES WORK PLAN (DRAFT)

**PREPARED FOR:
FLORIDA DEPARTMENT OF COMMUNITY AFFAIRS**

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TABLE OF CONTENTS

1: INTRODUCTION	1
1.1: STATUTORY HISTORY.....	2
1.2: STATUTORY REQUIREMENTS.....	2
2: BACKGROUND INFORMATION:	4
2.1: OVERVIEW.....	4
2.2: RELEVANT REGIONAL ISSUES.....	5
3: DATA AND ANALYSIS	5
3.1: POPULATION INFORMATION	5
3.2: MAPS OF CURRENT AND FUTURE AREAS SERVED	6
3.3: POTABLE WATER LEVEL OF SERVICE STANDARD	7
3.4: POPULATION AND POTABLE WATER DEMAND PROJECTIONS BY EACH LOCAL GOVERNMENT UTILITY	8
3.5: WATER SUPPLY PROVIDED BY OTHER ENTITIES	11
3.6: CONSERVATION	12
3.7: REUSE.....	13
4: CAPITAL IMPROVEMENTS	14
4.1: WORK PLAN PROJECTS.....	14
5: GOALS, OBJECTIVES AND POLICIES	18

LIST OF TABLES

TABLE WSFWP-1: MINIMUM FIRE FLOW LOS	7
TABLE WSFWP-2: MIAMI-DADE COUNTY WATER AND SEWER DEPARTMENT (MDWASD) POPULATION AND WATER DEMAND PROJECTIONS	9
TABLE WSFWP- 3: CITY OF NORTH MIAMI BEACH (NMB) POPULATION AND WATER DEMAND PROJECTIONS	9
TABLE WSFWP- 4: POPULATION PROJECTIONS BY MIAMI GARDENS, NORTH MIAMI BEACH AND MIAMI-DADE MDWASD	10

LIST OF EXHIBITS

EXHIBIT WSFWP -1: MIAMI-DADE WATER AND SEWER DEPARTMENT RETAIL CUSTOMERS BY MUNICIPALITIES	15
FIGURE WSFWP-2: LOCAL GOVERNMENTS SERVED BY THE CITY OF NORTH MIAMI BEACH..	16

1: INTRODUCTION

The purpose of the City of Miami Gardens 10 Year Water Supply Facilities Work Plan (Work Plan) is to identify and plan for the water supply sources and facilities needed to serve existing and new development within the local government's jurisdiction. Chapter 163, Part II, F.S., requires local governments to prepare and adopt Work Plans into their comprehensive plans within 18 months after the water management district approves a regional water supply plan or its update. The *Lower East Coast Water Supply Plan Update* was approved by the South Florida Water Management District (SFWMD) on February 15, 2007. Therefore, the deadline for local governments within the Lower East Coast jurisdiction to amend their comprehensive plans to adopt a Work Plan is August 15, 2008.

Residents of the City of Miami Gardens obtain their water directly from the City of North Miami Beach, Miami-Dade County Water and Sewer Department (MDWASD) and City of Opa-Locka (a wholesale customer of MDWASD) which are responsible for ensuring that enough capacity is available for existing and future customers. It should be noted that although Miami Gardens residents receive water through City of Opa-Locka and although the City owns and operates the facilities for the distribution of water, Miami-Dade County supplies the water commodity. As the third entity that provides water service to City of Miami Gardens, the total storage capacity of that system is 1.7 MGD (City of Opa-Locka Comprehensive Plan). A small portion of Miami Gardens north of the south corporate limits at NW 151st Street is served through the City of Opa-Locka. Per the Opa-Locka's Comprehensive Plan, approximately 1,237 customers outside the municipal jurisdiction are served through the system.

As such, the City of Miami Gardens 10-Year Water Supply Facilities Work Plan (Work Plan) will have a planning timeframe of 10 years. Since the City is a retail buyer, the Work Plan references the initiatives already identified in the City of North Miami Beach 10-Year Water Supply Facilities Work Plan, May 2008 and Miami-Dade County Water and Sewer Department Water Supply Facilities Work Plan Report, November 26, 2007. According to state guidelines, the Work Plan and the comprehensive plan amendment must address the development of traditional and alternative water supplies, bulk sales agreements and conservation and reuse programs that are necessary to serve existing and new development for at least a 10-year planning period. The City of Miami Gardens shall adopt by reference its service providers work plans namely the Miami-Dade Water and Sewer Department's (MDWASD) Water Supply Facilities Work Plan Report, November 26, 2007 developed by MDWASD and adopted by the Board of County Commissioners of Miami-Dade County on April 24, 2008; and City of North Miami Beach's 10-Year Water Supply Facilities Work Plan, May 2008; and all related data and analysis will be reflected in the City's Work Plan accordingly including their population projections, demand projections and levels of service.

The City's Work Plan is divided into five sections:

Section 1 – Introduction

Section 2 – Background Information

Section 3 – Data and Analysis

Section 4 – Work Plan Projects/Capital Improvement Element/Schedule

Section 5 – Goals, Objectives, Policies

1.1: Statutory History

The Florida Legislature has enacted bills in the 2002, 2004, and 2005 sessions to address the state's water supply needs. These bills, especially Senate Bills 360 and 444 (2005 legislative session), significantly changed Chapter 163 and 373 Florida Statutes (F.S.) by strengthening the statutory links between the regional water supply plans prepared by the water management districts and the comprehensive plans prepared by local governments. In addition, these bills established the basis for improving coordination between the local land use planning and water supply planning.

1.2: Statutory Requirements

The City of Miami Gardens shall comply with the following statutory requirements:

- 1) Coordinate appropriate aspects of its comprehensive plan with the appropriate water management district's regional water supply plan, [163.3177(4)(a), F.S.]
- 2) Ensure that the future land use plan is based upon availability of adequate water supplies and public facilities and services [s.163.3177(6)(a), F.S., effective July 1, 2005]. Data and analysis demonstrating that adequate water supplies and associated public facilities will be available to meet projected growth demands must accompany all proposed Future Land Use Map amendments submitted to the Department for review. The submitted package also includes an amendment to the Capital Improvements Element, to demonstrate that adequate public facilities will be available to serve the proposed Future Land Use Map modification.
- 3) Ensure that adequate water supplies and facilities area available to serve new development no later than the date on which the City anticipates issuing a certificate of occupancy and consult with the applicable water supplier prior to approving building permit, to determine whether adequate water supplies will be available to serve the development by the anticipated issuance date of the certificate of occupancy [s.163.3180 (2)(a), F.S., effective July 1, 2005]. This "water supply concurrency" is now in effect, and the City will be complying with the requirement for all new development proposals. In addition, the City following adoption of its first Comprehensive Development Master Plan (CDMP), is now under the process of developing its own land development regulations to address these statutory requirements. The City recognizes that latest point at which the CDMP must be revised to reflect the concurrency requirements is at the time when the City adopts plan amendments to implement the recommendations of the Evaluation and Appraisal Report (EAR).

- 4) For local governments subject to a regional water supply plan, revise the General Sanitary Sewer, Solid Waste, Drainage, Potable Water, and Natural Groundwater Aquifer Recharge Element (the “Infrastructure Element”), within 18 months after the water management district approves an updated regional water supply plan, to:
 - a. Identify and incorporate the alternative water supply project(s) selected by the local government from projects identified in the updated regional water supply plan, or the alternative project proposed by the local government under s. 373.0361(7), F.S. [s. 163.3177(6)(c), F.S.];
 - b. Identify the traditional and alternative water supply projects, bulk sales agreements, and the conservation and reuse programs necessary to meet current and future water use demands within the local government’s jurisdiction [s. 163.3177(6)(c), F.S.]; and
 - c. Include a water supply facilities work plan for at least a 10-year planning period for constructing the public, private, and regional water supply facilities identified in the element as necessary to serve existing and new development. [s. 163.3177(6)(c), F.S.] Amendments to incorporate the water supply facilities work plan into the comprehensive plan are exempt from the twice-a-year amendment limitation. [s. 163.3177(6)(c), F.S.]
 - 5) Revise the Five-Year Schedule of Capital Improvements to include any water supply, reuse, and conservation projects and programs to be implemented during the five-year period.
 - 6) To the extent necessary to maintain internal consistency after making changes described in Paragraph 1 through 5 above, revise the Conservation Element to assess projected water needs and sources for at least a 10-year planning period, considering the appropriate regional water supply plan, the applicable District Water Management Plan, as well as applicable consumptive use permit(s). [s.163.3177 (6)(d), F.S.]

If the established planning period of a comprehensive plan is greater than ten years, the plan must address the water supply sources necessary to meet and achieve the existing and projected water use demand for established planning period, considering the appropriate regional water supply plan. [s.163.3167 (13), F.S.]
 - 7) To the extent necessary to maintain internal consistency after making changes described in Paragraphs 1 through 5 above, revise the Intergovernmental Coordination Element to ensure coordination of the comprehensive plan with applicable regional water supply plans and regional water supply authorities’ plans. [s.163.3177(6)(h)1., F.S.]
 - 8) Address in the EAR, the extent to which the local government has implemented the 10-year water supply facilities work plan, including the development of alternative water supplies, and determine whether the identified alternative water supply projects, traditional water supply projects, bulk sales agreements, and conservation and reuse programs are meeting local water use demands. [s.163.3191 (2)(1), F.S.]
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2: BACKGROUND INFORMATION:

2.1: Overview

The City of Miami Gardens was incorporated in May 2003, making it the third largest municipality established in Miami-Dade County. The boundaries of the City encompass an area approximately twenty square miles bounded by NW 2nd Avenue/US 441 to the east, NW 151 Street to the south, NW 47 Avenue and NW 57 Avenue to the west, and NW 215 Street/County Line Road to the north. The City of Miami Gardens is a highly urbanized metropolitan area, landlocked and surrounded by North Miami Beach, Miami Lakes, Opa-Locka, and Miramar (see City of Miami Gardens Comprehensive Development Master Plan (CDMP), Future land use Element (FLUE), Exhibit FLU I-1, Aerial Photograph). The City is primarily residential with a number of high intensity commercial/industrial areas, mainly developed along transportation routes. As seen from the Aerial Photograph, the City is essentially “built-out.” The growth focus is now turning towards infill development and redevelopment opportunities.

Between 1990 and 2000, the City’s population grew from 98,105 to 100,809, an increase of 2.75 percent. By 2010 the City’s population is estimated to increase to 110,751, an increase of 9.86% since 2000. Based on the data provided by the University of Florida Bureau of Economic and Business Research (BEBR), and analysis in CDMP, FLUE, Table FLU-I-2: Historical Population Growth and Projections contained in the CDMP, it is anticipated that by 2015 and 2020 the population of Miami Gardens will increase to 112,246 persons (a 4.05% share of Miami-Dade County population) and 112,713 persons (a 3.85% share of the total Miami-Dade County population) respectively.

The existing trend information in CDMP, FLUE’s Table FLU I-2 shows the following:

- The City population increased during the 1990’s, albeit at a modest rate of 2,704 persons or 2.76% during the ten year period;
- Population growth appears to be accelerating during more recent periods. Between 2000 and 2004 an increase of 4, 605 persons (4.57%) provides for a 1,151 person average annual increase compared to 270 persons annually during the preceding ten year period; and,
- The City’s population is decreasing as a proportion of Miami-Dade County’s population.

The population projections from North Miami Beach and Miami-Dade Water and Sewer (MDWASD) Work Plans for served areas project a 2015 population of approximately 108,849 and 2020 population of approximately 114,113persons. It should be noted that the City of Miami Gardens estimates in the CDMP are based on historic and current population figures and current growth trends. Due to the fact that Miami Gardens was incorporated in 2003 neither the 1990, or the 2000 Census tabulated population information for the City. Therefore there is no official population count for the City of Miami Gardens. However Miami-Dade County Department of

Planning and Zoning aggregated the Census statistical areas including individual blocks and block groups to provide population estimated for 1990 and 2000. Population projections for Miami Gardens were estimated using the mathematical extrapolation technique. It is anticipated that the 2010 Census will provide opportunities to further review its population estimates. The City does not anticipate substantial increases in land area in the near future, unless there is policy decision from the City Council to reconsider their position on annexation. In the meantime, the residential and non-residential growth rate is anticipated to be minimal for the next 10 to 20 years.

Per City's CDMP, approximately thirty-seven (37) percent of the City is developed with residential uses (single-family, multi-family and mobile homes). Commercial uses represent almost eight (8) percent of the total acreage. The acreage noted in Table FLU I-1 of the FLUE of the CDMP includes the commercial corridors as well as privately owned recreational facilities such as the nationally known Dolphins Stadium and the Calder Racetrack. Industrial uses comprise approximately six (6) percent of the total area in the City. This comprises of the two major industrial parks within the City namely Sunshine State Industrial Park and Palmetto Lakes Industrial Park. Institutional uses (institutional, educational and airport) comprise approximately eight (8) percent of the total area in the City. Vacant lands currently comprise approximately 1,128 acres, or seven (8.5) percent of the total land area. This amount includes committed development. As shown in CDMP, FLUE's Table FLU I-1, there are approximately 3,526 acres of transportation in the City, or twenty-seven (27) percent of the total land area. Other categories not included in the classifications listed above are Agriculture and Water. Agriculture comprises a minimum part of the land use in the City, with less than one (1) percent, and water accounts for approximately five (5) percent.

2.2: Relevant Regional Issues

As the state agency responsible for water supply in the Lower East Coast planning area, the South Florida Water Management District (SFWMD) plays a pivotal role in resource protection, through criteria used for Consumptive Use Permitting. As pressure increased on the Everglades ecosystem resource, the Governing Board initiated rule making to limit increased allocations dependent on the Everglades system. As a result, the Regional Water Availability Rule was adopted by the Governing Board on February 15, 2007 as part of the SFWMD's water use permit program. This reduced reliance on the regional system for future water supply needs, mandates the development of alternative water supplies, and increasing conservation and reuse.

3: DATA AND ANALYSIS

3.1: Population Information

Between 1990 and 2000, the City's population grew from 98,105 to 100,809, an increase of 2.75 percent. By 2010 the City's population is estimated to increase to 110,751, an increase of 9.86% since 2000. Based on the data provided by the University of Florida Bureau of Economic and

Business Research (BEBR), and analysis in Table FLU-I-2: Historical Population Growth and Projections contained in the CDMP, it is anticipated that by 2015 and 2020 the population of Miami Gardens will increase to 112,246 persons (a 4.05% share of Miami-Dade County population) and 112,713 persons (a 3.85% share of the total Miami-Dade County population) respectively.

The existing trend information in Table FLU I-2 shows the following (Miami Gardens CDMP, FLUE):

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- The City's population is decreasing as a proportion of Miami-Dade County's population.

The population projections from North Miami Beach and Miami-Dade Water and Sewer (MDWASD) Work Plans for served areas project a 2015 population of approximately 108,849 and 2020 population of approximately 114,113 persons. It should be noted that the City of Miami Gardens estimates in the CDMP are based on historic and current population figures and current growth trends. Due to the fact that Miami Gardens was incorporated in 2003 neither the 1990, or the 2000 Census tabulated population information for the City. Therefore there is no official population count for the City of Miami Gardens. However Miami-Dade County Department of Planning and Zoning aggregated the Census statistical areas including individual blocks and block groups to provide population estimated for 1990 and 2000. Population projections for Miami Gardens were estimated using the mathematical extrapolation technique. It is anticipated that the 2010 Census will provide opportunities to further review its population estimates. The City does not anticipate substantial increases in land area in the near future, unless there is policy decision from the City Council to reconsider their position on annexation. In the meantime, the residential and non-residential growth rate is anticipated to be minimal for the next 10 to 20 years.

3.2: Maps of Current and Future Areas Served

The maps depicting City boundaries served by the MDWASD and City of North Miami Beach are provided in Exhibit WSFWP-1: Miami-Dade Water and Sewer Department Retail Customers by Municipalities and Exhibit WSFWP-2: Local Governments Served by the City of North Miami Beach. Please see Exhibit WSFWP-3 (Miami Gardens CDMP Infrastructure Element MAP INF III -3) for the City of North Miami Beach / MDWASD Water Service Area Exchange.

3.3: Potable Water Level of Service Standard

City of Miami Gardens Level of Service Standard

The City of Miami Gardens does not provide potable water utility services to its residents directly. Residents of the City of Miami Gardens obtain their water directly from the City of North Miami Beach, Miami-Dade County Water and Sewer Department (MDWASD) and City of Opa-Locka (a wholesale customer of MDWASD) which are responsible for ensuring that enough capacity is available for existing and future customers. It should be noted that although Miami Gardens residents receive water through City of Opa-Locka and although the City owns and operates the facilities for the distribution of water, Miami-Dade County supplies the water commodity. As the third entity that provides water service to City of Miami Gardens, the total storage capacity of that system is 1.7 MGD (City of Opa-Locka Comprehensive Plan). A small portion of Miami Gardens north of the south corporate limits at NW 151st Street is served through the City of Opa-Locka. Per the Opa-Locka's Comprehensive Plan, approximately 1,237 customers outside the municipal jurisdiction are served through the system.

Miami Gardens is a retail customer of City of North Miami Beach and MDWASD. All potable water facilities are provided through these two entities, Miami Gardens will adopt two level of service standards (LOS).

The minimum fire flows are described below in Table WSFWP-1. These fire flows are maintained by Miami-Dade MDWASD and are based on the following land uses: Single Family Residential/ Estate, Single Family, Duplex, and Residential on minimum lots of 7,500 square feet, Multifamily Residential; Semiprofessional Offices, Hospitals; Schools, Business and Industry.

Table WSFWP-1: Minimum Fire Flow LOS

LAND USE	MINIMUM FIRE FLOW (GAL/MIN)
Single Family Residential/Estate	500
Single Family, Duplex, and Residential on minimum lots of 7,500 square feet	750
Multifamily Residential; Semiprofessional Offices	1,500
Hospitals; Schools	2,000
Business: Industry	3,000

Sources: Miami-Dade County Adopted 2003 Evaluation and Appraisal Report, Water, Sewer and Solid Waste Element.

The new Level of Service Standards that will be adopted by City of Miami Gardens are as follows:

Miami-Dade County Service Area Level of Service Standard

The adopted Miami-Dade County Comprehensive Development Master Plan allows for the following level of services:

- **Regional Treatment:** The regional treatment system shall operate with a rated maximum daily capacity no less than 2 percent above the maximum daily flow for the preceding year, and an average daily capacity 2 percent above the average daily system demand for the preceding 5 years.
- **Water Quality:** Water quality shall meet all federal, state, and county primary standards for potable water.
- **Countywide Storage Capacity:** Countywide storage capacity for finished water shall equal no less than 15 percent of the countywide average daily demand.
- **Water is delivered to users at a pressure no less than 20 pounds per square inch (psi) and no greater than 100 psi.**
- **Miami Gardens will adopt the County's system-wide per capita of 155 gallons per capita per day as its level of service standards.**
- **User LOS:** 155 gallons per capita per day for areas served by Miami Dade County.

City of North Miami Beach Service Area Level of Service Standard

- **Potable Water:** the City's water system shall provide 144 gallons per person per day at a pressure of 40 pounds per square inch (psi). The City attempts to maintain a water pressure of 40 pounds per square inch (psi) although 20 psi is the legal minimum.
- **User LOS:** 144 gallons per capita per day for areas served by North Miami Beach.
- **Miami Gardens will adopt the LOS standards of 144 gallons per person per day consistent with North Miami Beach level of service standards.**

Both Miami Dade County MDWASD and the City of North Miami Beach are addressing water conservation issues and implementing measures to reduce the per capita water consumption. The City of Miami Gardens will continue to coordinate with both utility providers to be consistent with their Water Facility Work Plans and requirements consistent with State Statutes.

3.4: Population and Potable Water Demand Projections by Each Local Government utility

The City of Miami Gardens receives water service from Miami-Dade County primarily through the Hialeah-Preston Water Treatment Plant. Miami-Dade County MDWASD is primarily

responsible for maintaining the distribution and operating the facilities that serve City of Miami Gardens. The City is located in the County's north regional water service area. The potable water system collectively serves all residential and non-residential land uses in Miami Gardens, including approximately 105,414 persons (BEBR 2004 estimate) or 30,000 housing units (CDMP). The City of Miami Gardens also receives water service from City of North Miami Beach from the Norwood Water Treatment Plant, located at 19150 NW 8th Avenue within Miami Gardens. Based on year 2000 data, the North Miami Beach treatment system at the Norwood Treatment Plant has a permitted annual daily capacity of 15 MGD. Per the City of North Miami Beach 10-Year Water Supply Facilities Work Plan, May 2008, the facility is expandable within current facilities from 32 MGD to approximately 38.5 MGD with the addition of a Reverse Osmosis (RO) membrane treatment skid and additional RO vessels plus associated pre and post treatment equipment.

The City shall incorporate goals, objectives and policies specifically related to Water Supply that emphasize the need to work closely with Miami-Dade County MDWASD, City of North Miami Beach, and all related agencies to ensure efficient provision of potable water for all existing and future development in the City.

**Table WSFWP-2: Miami-Dade County Water and Sewer Department (MDWASD)
Population and Water Demand Projections**

	2007	2010	2015	2020	2025	2030
Overall City	100,541	106,969	112,028	116,536	121,044	125,552
Serviced by MDWASD	62,828	61,568	64,497	67,417	70,338	73,259
Demand (MGD)	9.74	9.54	10.00	10.45	10.90	11.36

Source: Miami-Dade Water and Sewer Department, Water Supply Facilities Work Plan Report, November 26, 2007.

Table WSFWP- 3: City of North Miami Beach (NMB) Population and Water Demand Projections

	2006	2008	2013	2018	2027	2030
Overall City	-	-	-	-	-	-
Serviced by NMB	40,126	41,068	43,421	45,750	50,007	51,434
Demand (MGD)*	-	28.16	29.79	31.80	38.38	39.75

Source: City of North Miami Beach, 10-Year Water Supply Facilities Work Plan, May 2008.

*This is total demand. Only a portion of Miami Gardens is serviced by the City of North Miami Beach; information for City of Miami Gardens is not available.

As mentioned earlier, the future population of Miami Gardens was estimated using mathematical extrapolation. This method is suitable for local planning agencies so long as the limitations of the technique is understood. Estimates and projections derived from extrapolation techniques should be limited to short time periods (ten to fifteen years, maximum) and the resultant figures re-evaluated frequently. (Population Estimation and Projection Techniques Florida Department of Community Affairs, December 1, 1986, p. 9, paragraph 2). The City should carefully review population estimates each year by the University of Florida's Bureau of Economic and Business Research (BEBR). In addition, the City should accomplish a significant review of population projections and related demand of facilities and services subsequent to the U.S. Census that will occur in 2010. The major results of the 2010 Census will be available in 2011 which provides an opportune time for such a review. As such, population projections for Miami Gardens will be updated on the next Work Plan update and after the year 2010 Census.

The following table shows the population projections for Miami Gardens done by the City, City of North Miami Beach and Miami-Dade MDWASD. The table clarifies the different year projections used by these agencies for analyses.

Table WSWFP- 4: Population Projections by Miami Gardens, North Miami Beach and Miami-Dade MDWASD

Year	Miami Gardens	North Miami Beach (NMB)	Miami-Dade MDWASD	Totals NMB and MDWASD
2000	100,809	37,627		
2006	107,579	40,126		
2007	108,343	40,597*	62,828	103,425
2008	109,179	41,068	62,408**	103,476
2010	110,751	41,852*	61,568	103,420
2013	111,727	43,421	63,325**	106,746
2015	112,246	44,352*	64,497	108,849
2018	112,601	45,750	66,249**	111,999
2020	112,713	46,696*	67,417	114,113
2025	124,214	49,061*	70,338	119,399
2027	110,960	50,007	71,506**	121,513
2030	109,358	51,434	73,259	124,693

Sources and Methodology:

Miami Gardens Data derived from Miami Gardens CDMP.

Year 2000: U.S. Census as compiled by Miami-Dade Planning and Zoning Department.

Year 2006: University of Florida Bureau of Economic Business and Research Estimate, City.

Years 2007 - 2030: Miami Gardens' populations are based on a straight line projection of the 1990-2006 population compiled by Miami Gardens Planning and Zoning Department.

North Miami Beach

City of North Miami Beach, 10-Year Water Supply Facilities Work Plan, May 2008.

*Interpolated number derived by calculating the interim years' average.

Miami-Dade MDWASD

Miami-Dade Water and Sewer Department, Water Supply Facilities Work Plan Report, November 26, 2007.

**Interpolated number derived by calculating the interim years' average.

3.5: Water Supply Provided by Other Entities

Miami-Dade Water and Sewer Department

The Miami-Dade County 20-Year Water Supply Facilities Work Plan is attached as Appendix A. The intent of the County Work Plan is to meet the statutory requirements mentioned in subsection 1.2 of this plan and to coordinate the MDWASD's water supply initiatives with the SFWMD's *Lower East Coast Water Supply Plan Update*.

The MDWASD's service area is all portions of Miami-Dade County within the Urban Development Boundary (UDB), excluding Homestead, Florida City, North Miami Beach and portions of North Miami. The areas within the Urban Expansion are included in the planning horizon after 2015. The following summarizes Miami-Dade County's Work Plan:

- Description of population and water demand projections (Exhibit C-1 and C-2, Water Supply Service Area, Retail and Wholesale Customers, respectively, by Municipality provides municipal population projections and projected AADF "Annual Average Daily Flow" finished water based on 155 gallons per capita per day (gpcd). The population information was derived from Miami-Dade County Department of Planning and Zoning Transportation Analysis Zone (TAZ) 2004 population data. This subsection also provides a brief discussion of MDWASD's conservation and reuse programs.);
- The Water Supply Facilities Work Plan details the facilities and proposed alternative water supply (AWS) projects that are planned in order to meet the water demands through 2027. These projects are expected to be completed in increments consistent with the projected growth set forth in the Plan. The AWS projects and annual average daily demand (AADD) assumes that all current wholesalers will remain in the MDWASD system through 2027, except for the City of North Miami Beach. The AWS projects are included in the County's Capital Improvement Element.

In the 20-Year Work Plan, the MDWASD is committed to meet the water demand for the municipalities within the service area. The City of Miami Gardens is served by the Hialeah-Preston sub-area water treatment plants (WTP) located at 200 W. 2nd Avenue and 1100 W. 2nd Avenue respectively. The Hialeah-Preston (H-P) subarea is comprised of dedicated low-pressure pipelines, remote storage tanks, pumping facilities and high pressure systems. The adjacent facilities in Hialeah share interconnected source water and finished water storage capacity. The two plants have similar processes. The source of water for the Hialeah Water Treatment Plant is from the Hialeah-Miami Springs Wellfields, supplemented by the Northwest Wellfield. The Hialeah WTP has a current rated capacity of

60mgd. The main source of water for the Preston WTP is from the Northwest Wellfield. The current rated capacity is 165 mgd.

City of North Miami Beach

The City of North Miami Beach (NMB) 10-Year Water Supply Facilities Work Plan is attached as Appendix B. The intent of the Work Plan is to meet the statutory requirements mentioned in subsection 1.2 of this plan and to coordinate the City's water supply initiatives with the SFWMD's *Lower East Coast Water Supply Plan Update*.

The NMB's service area is comprised roughly of the area bounded by the Atlantic Ocean on the east; NW 37th Avenue on the west; NW 128th, NW 135th, NW 143rd and NE 146th on the south; and, Ives Dairy Road and Snake Creek Canal on the north.

The following summarizes City of North Miami Beach's Work Plan:

- Description of population and water demand projections are given and the projected AADF "Annual Average Daily Flow" finished water is based on 144 gallons per capita per day (gpcd).
- The Water Supply Facilities Work Plan details the facilities and proposed alternative water supply (AWS) projects that are planned in order to meet the water demands through 2030. These projects are expected to be completed in increments consistent with the projected growth set forth in the Plan.

As detailed in the 10-Year Work Plan, the NMB is committed to meet the water demand for the municipalities within the service area.

3.6: Conservation

Both Miami-Dade MDWASD and North Miami Beach are addressing water conservation and implementing alternative strategies to reduce per capita water consumption. Miami-Dade MDWASD will be undertaking a 20-year conservation plan and evaluate ways for reducing non-revenue water. Currently MDMDWASD implements all Best management Practices (BMP) included in the 20-year plan and other conservation initiatives. North Miami Beach implemented a water conservation program in 1999 that includes combination of educational, financial, operational and regulatory initiatives to encourage more efficient water use. In addition to identifying alternative water supply projects, conservation and reuse programs, these agencies have also included their capital improvement projects necessary to meet projected water demands for the population in their respective service areas. The City of Miami Gardens will continue to coordinate with both utility providers to be consistent with their Water Facility Work Plans and requirements consistent with State Statutes.

3.6.1 County-wide Issues

The Miami-Dade Water Use Efficiency Plan

Currently, the MDWASD is implementing all Best Management Practices (BMPs) included in the 20-year Water Use Efficiency Plan, which was approved by the South Florida Water Management District in May 2007.

Water Conservation Plans and Development Codes

In addition, all of the MDWASD's wholesale customers are required to submit a Water Conservation Plan to its Water Use Efficiency Section as mandated by County Ordinance 06-177, Section 32-83.1 of the Miami-Dade County Code. The Plan will identify BMPs based on population characteristics and type of service for each municipal service area.

In addition, Miami-Dade County has developed recommendations for new development that would achieve higher water use savings than currently required by code. All future developments are required to comply with water use efficiency techniques for indoor water use in accordance with Section 8-31, 32-84 and 8A-381 of the Code of Miami-Dade County. These water efficiency recommendations represent an additional 30 percent to the water savings identified in the 20-year Water Use Efficiency Plan. All applicants will be required to comply with these code requirements. All water use efficiency ordinances are also posted in the Miami-Dade Water Conservation Portal.

Per Capita Consumption

Furthermore, the MDWASD will establish per capita consumption for all municipalities including those in its retail customer service area. Based on this data, the MDWASD will work with the municipalities to address those with higher than average per capita and will target programs for those areas. The County anticipates that the implementation of the BMPs identified in the 20-Year Water Use Efficiency Plan will result in an adjusted system wide per capita of 147.82 gpcd by 2027.

3.6.2 Local Government Specific Actions, programs, Regulations, or Opportunities

The City will coordinate future water conservation efforts with the MDWASD and the SFWMD to ensure that proper techniques are applied. In addition, the City will continue to support and expand existing goals, objectives and policies in the comprehensive plan that promotes water conservation in a cost-effective and environmentally sensitive manner. The City will continue to actively support the SFWMD and Miami-Dade County in the implementation of new regulations or programs that are design to conserve water during the dry season.

3.7: Reuse

3.7.1 Regional and County-wide Issues

State law supports reuse efforts. For the past years, Florida's utilities, local governments, and water management districts have led the nation in

implementing water reuse programs that increase the quantity of reclaimed water used and public acceptance of reuse programs. Section 373.250(1) F.S. provides that “water reuse programs designed and operated in compliance with Florida’s rules governing reuse are deemed protective of public health and environmental quality.” In addition, Section 403.064(1), F.S., provides that “reuse is a critical component of meeting the State’s existing and future water supply needs while sustaining natural systems.”

The City of Miami Gardens supports water reuse initiatives under consideration by both the SFWMD and Miami-Dade County. The County has committed to implement a total of 170 MGD of water reuse as noted in the County’s 20-year water use permit. In the 20-year Work Plan, the County identified a number of water reuse projects and their respective schedule. According to the Plan, “reuse projects to recharge the aquifer with highly treated reclaimed water will be in place before additional withdrawals over the base condition water use are made from the Alexander Orr and South Dade sub-area wellfields. In addition, reuse irrigation projects are ~~anticipated for the North and Central District Wastewater Treatment Plants. These projects will be implemented in the Cities of North Miami and North Miami Beach, and are~~ currently under construction for Key Biscayne.”

3.7.2 Local Government Specific Actions, Programs, Regulations or Opportunities

The City will support the SFWMD and Miami-Dade County water reuse projects, and implementation of new regulations or programs designed to increase the volume of reclaimed water used and public acceptance of reclaimed water.

4: CAPITAL IMPROVEMENTS

4.1: Work Plan Projects

The work plan projects for both MDMDWASD and North Miami Beach are described in the attached work plans.

4.2.1 Capital improvements Element/Schedule

The capital improvement projects for both MDMDWASD and North Miami Beach are described in the attached work plans.

Exhibit WSFWP -1: Miami-Dade Water and Sewer Department Retail Customers by Municipalities

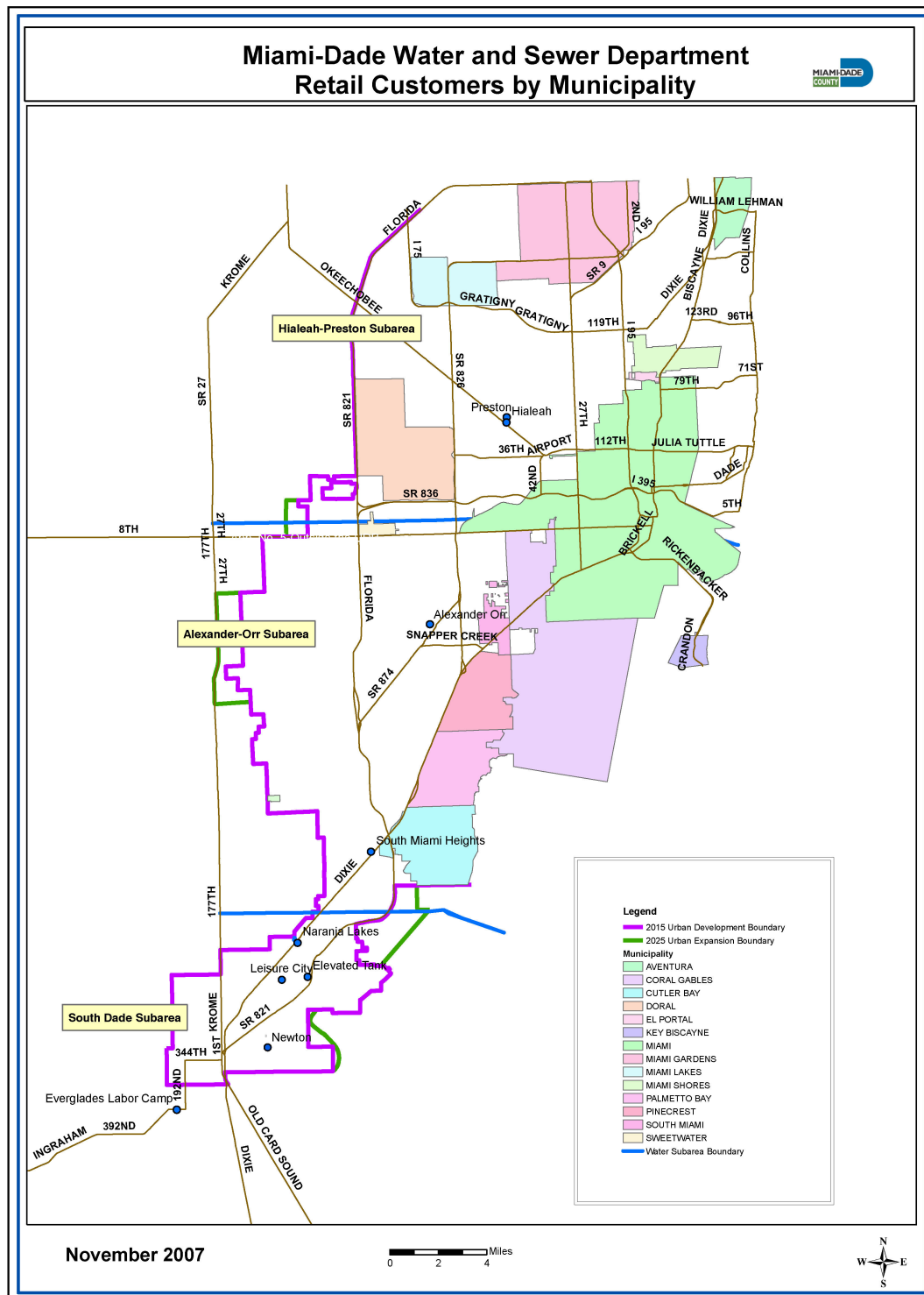


Exhibit WSFWP-2: Local Governments Served by the City of North Miami Beach.

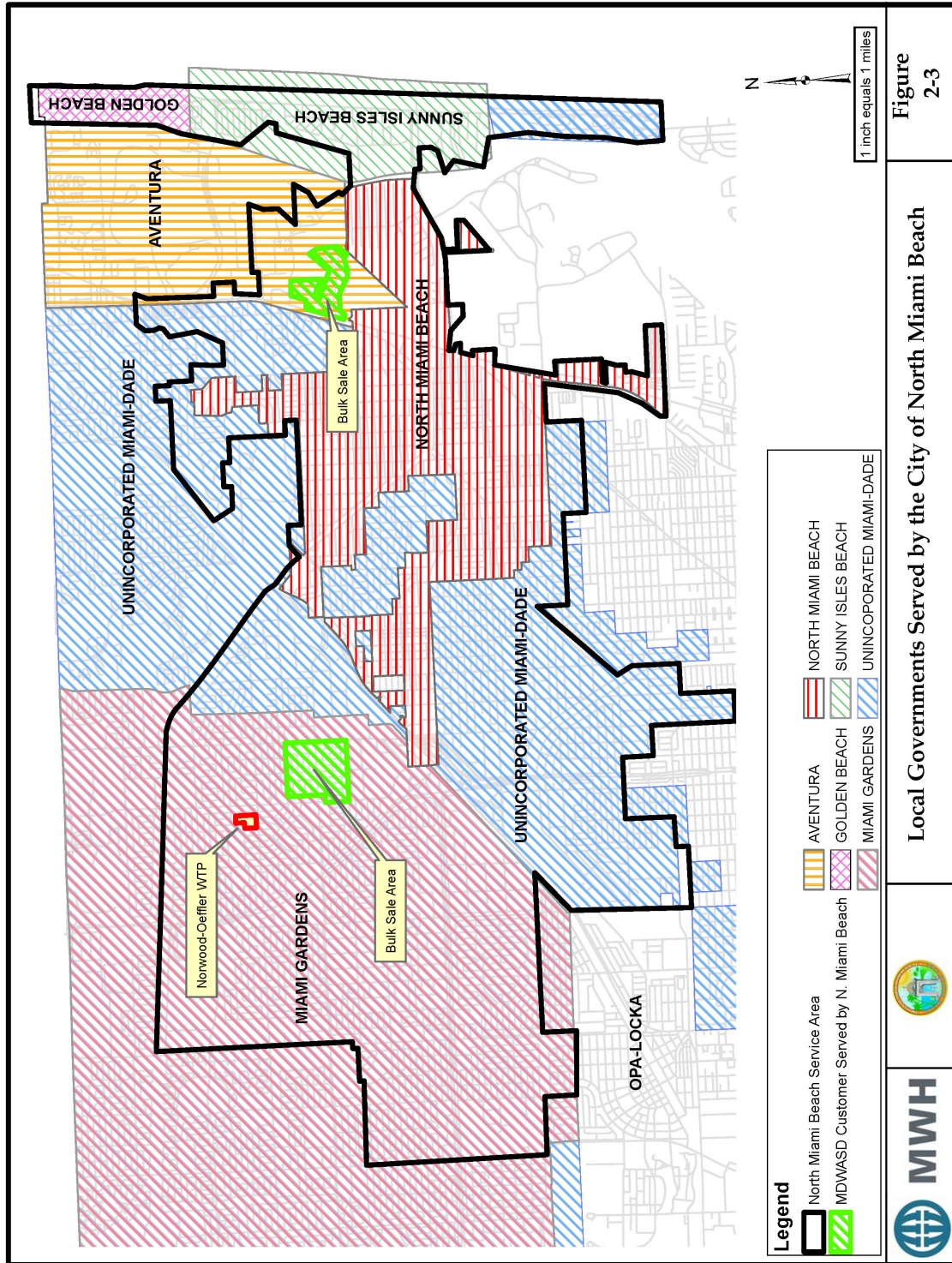
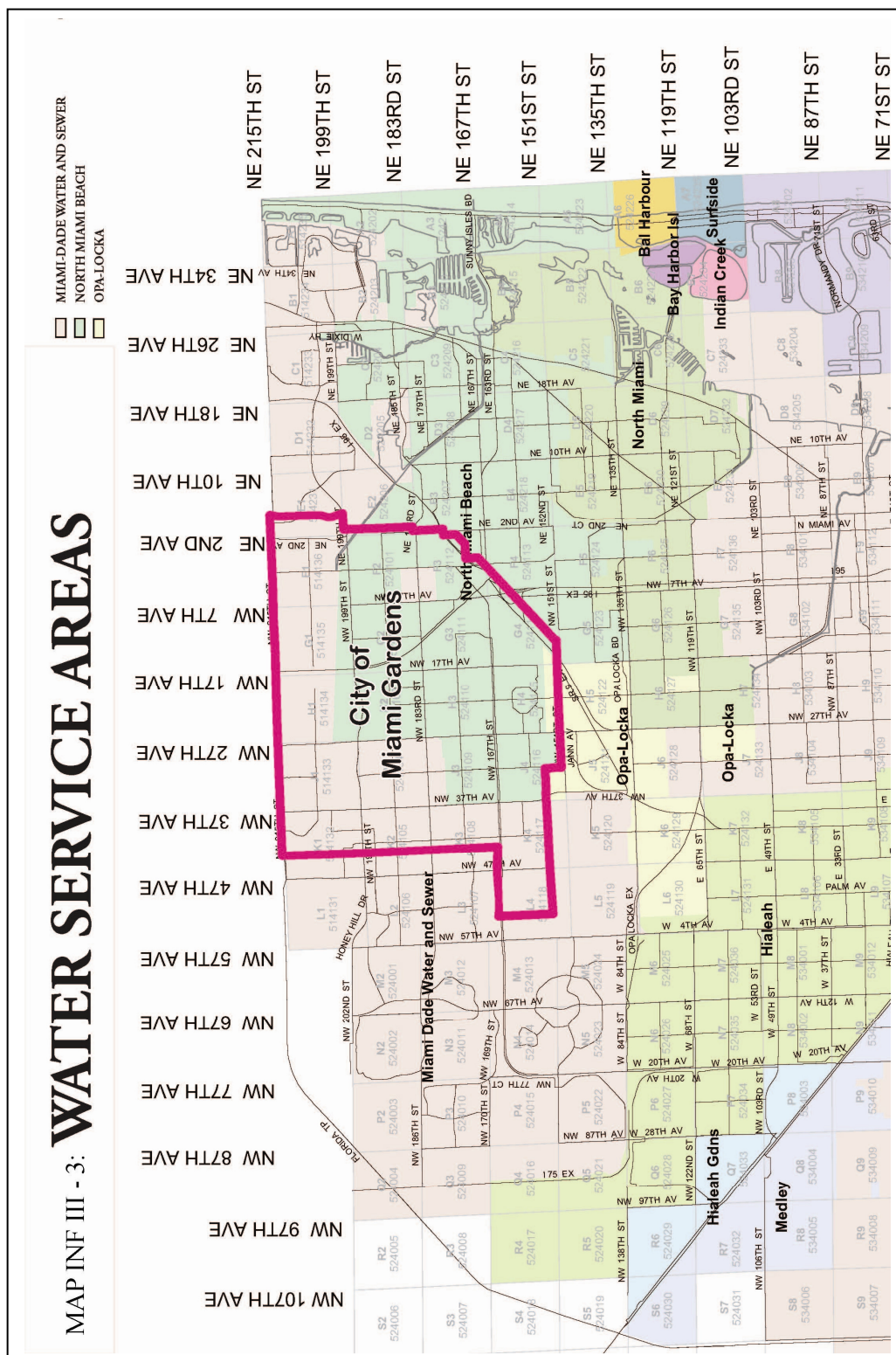


Exhibit WSFWP-3: City of North Miami Beach /MDWASD Water Service Area Exchange



5: GOALS, OBJECTIVES AND POLICIES

The attached Goals, Objectives and Policies of the Infrastructure Element, Conservation Element, Intergovernmental Coordination Element and Capital Improvements Element from the City's CDMP are stated for the purpose of the City of Miami Gardens 10-Year Water Supply Facilities Work Plan. Amendments to the City's CDMP are shown as underlined or stricken.